Interactions of source prestige, goal set, and task difficulty in conforming behavior

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The variables of task difficulty, prestige of the source of influence, and goal set were manipulated together within a factorial analysis of variance design. Pressures to conform to judgments of others were exerted through a paper-and-pencil conformity instrument. All three main effects were significant and each variable entered into at least one significant interaction effect with each other variable. The results displayed mutual facilitation, interference, and interaction of factors in shaping the conforming behavior and were interpreted in terms of informational and normative processes.

Two important trends in the study of conforming behavior stimulated the research program which included the present investigation. First was the theoretical discussion opposing an oversimplified univariate process explanation of conformity and suggesting instead two or more different psychological processes leading to behavioral conformity (e.g., Deutsch & Gerard, 1955; Kelman, 1958; McDavid & Sistrunk, 1964). Also, there was the observation that conforming behavior is neither a simple result of predispositional subject factors nor completely determined by the situational conditions under which the behavior is performed. Instead, conformity depends on both classes of variables and is an interactive product of a number of determinants (Nord, 1969).

This particular investigation was designed to focus on three critical variables which had been shown in prior research to be significant main-effect determinants of conformity and which represented different aspects of the social situation confronting the S. These variables were the difficulty of the judgmental task, the prestige of the source of influence, and the goal set or atmosphere under which the task was performed. These variables were selected because of the expected empirical and theoretical utility of their combined operation. Anticipated as an empirical contribution was the demonstration of mutual facilitation and interference as well as elaborate interactions among the three factors in producing overt conforming behavior. The expected theoretical contribution was in the parsimonious interpretation of these interactions in terms of two generic processes of informational and normative conformity.

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SUBJECTS

The Ss were 160 university students enrolled in introductory psychology classes.

PROCEDURE

Observations of conforming behavior were made within the context of a series of judgmental tasks disguised as a group-administered paper-and-pencil "synonyms" test. Each of 70 items presented a key word, with four alternative multiple choices presented to the right. The S was instructed (with variations to manipulate goal set and source prestige as described below) to indicate which of four alternatives represented the closest synonym for the key word. The task was executed by all Ss individually while in groups of 10 to 15 persons. Social influence was exerted, not in the form of reports from the group of people physically present, but through penciled marks on the test booklet beside predesignated items. Such marks appeared beside 25 of the test items in irregular sequence, and were attributed by the E to previous users of the test booklets. In giving instructions to the Ss, E informally commented that he was aware that prior users of the booklets had, despite his instructions, carelessly marked on some of the booklets, but that since there had not been time to go through and erase the marks or to prepare new test booklets, one should disregard any such marks he might encounter. The marks varied in form but represented an attempt to simulate the marks a test taker might place beside the multiple choices in deciding which answers he should select. This type of procedure has been utilized previously by Coffin (1949), Patel & Gordon (1960), and Sistrunk & Halcomb (1969). On 20 "critical" items, the marks designated actually incorrect alternatives in order to exert pressure on the S's judgment, while on 5 "control" items, the marks appeared beside actually correct choices to alleviate suspicion of contrivance.

The three independent variables were manipulated procedurally.

Task Difficulty (T)

Of the 20 critical synonyms test items on which social influence was exerted, 10 were "easy" items on which a pretest sample of Ss from the same population had displayed 90% accuracy in identifying the correct synonym, and 10 were "difficult" items on which pretest Ss showed only a random (25%) accuracy in selecting the proper synonym.

Goal Set (S)

The S's orientation toward a particular goal or purpose in taking the synonyms test was manipulated by means of instructions, both orally by E and by printed instructions on the test booklets. Half the Ss were told that the word test was a "verbal intelligence test" which should be closely related to their academic ability. The remaining half were told in the same manner that the test was a "synonyms agreement test" which measured conventionality and agreement among college students on common misconceptions of word synonyms. The intent of this manipulation was to arouse in one group a strong orientation toward personal achievement, and in the other a concern for conventionality and agreement with reference group norms.

Source Prestige (P)

Half of the Ss were informed by E that the previous users of the test booklets (the presumed source of the penciled marks) were selected graduate students at the university; the remaining half were informed that the previous test takers were high school students. This characterization afforded a rather broad concept of prestige, in that the two groups differed not only in terms of attributed intellectual ability, but also in terms of their meaningfulness as reference groups defining norms of conventionality for a college population. That is, graduate students, in contrast to high school students, presumably represented not only a more credible source of information about correct responses in a word test situation, but also represented a more meaningful source of norms for conventional behavior for college students.

RESULTS

Conformity scores representing the frequency of concurrence with the influenced choice on critical items ranged from 0 to 9 on the 10 easy

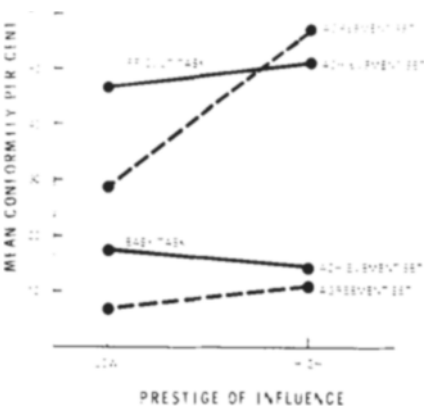

Fig. 1. Prestige by Goal Set by Task Difficulty interaction.

items and from 0 to 10 on the 10 difficult items. These data were submitted to a factorial analysis of variance, followed by multiple comparisons among the means within the significant interactions with Duncan's new multiple range test ($p < .05$).

Each of the variables investigated displayed a significant simple effect and also entered into interactive effects. Thus, at the outset there was corroboration of the general hypothesis that complex interactional determination of conforming behavior was to be expected as well as simple single-variable determination. Overall, these interactions revealed the tendency of certain variables to limit, obscure, or suppress the effects of other variables upon overt conforming behavior.

Significantly more conformity occurred on difficult items within the synonyms test than on easy items, regardless of other conditions [$F(1,156) = 579.52$, $p < .001$]. Significantly more conformity occurred among Ss led to believe that the purpose of the task was to assess individual intellectual ability than among those led to believe that the purpose was to investigate conventionality and uniformity of agreement among college students [$F(1,156) = 6.39$, $p < .025$]. And a significantly greater amount of conformity occurred among Ss led to believe that the source of the influencing marks on the test booklets were graduate students (high prestige) than among those told that the marks were made by high school students (low prestige) [$F(1,156) = 11.41$, $p < .001$].

Two double interactions, P by T and P by S, were also statistically significant [$F(1,156) = 26.88$, $p < .001$; $F(1,156) = 7.39$, $p < .01$]. These interactions are interpreted with respect to the operation of one variable limiting or modulating the effects of another. Although the task difficulty variable operated significantly in the same manner at both levels of source prestige, the P by T interaction indicated that the prestige effect operated primarily upon conformity on difficult or ambiguous items of the synonyms test. There was uniformly little conformity on easy items at both prestige levels, but significantly more conformity to the high-prestige source than to the low-prestige source on difficult items. The P by S interaction revealed that although the prestige variable showed a significant direct simple effect upon conforming behavior averaged across both goal set conditions, the effects of the two prestige levels were clearly differentiated only within the agreement or conventionality set condition. Under the agreement set condition, significantly less conformity occurred when the source of influence carried low prestige. The P by S interaction also indicated that the goal-set variable was most consequential in conjunction with low-prestige sources. High-prestige sources were equally successful in influencing behavior regardless of goal set, but low-prestige sources were significantly more influential on Ss instructed toward individual ability as contrasted with those set toward conventionality.

It had been expected that the T by S interaction would also attain significance, but it did not. However, a qualified T by S relationship was revealed in the significant P by S by T triple interaction [$F(1,156) = 6.41$, $p < .025$]. The predicted greater rate of increase in conformity across task difficulty for achievement set over agreement set held for low-prestige but not for high-prestige influence. This interaction also indicated that the combination effect of the prestige and goal-set variables (P by S) described above was especially clear-cut in connection with difficult or ambiguous judgments (see Fig. 1). These two factors operated more freely on difficult judgments and produced greater variation in the operation of a process of information seeking as an underlying basis of conformity. Further, in the relation of the P by T effect to the triple interaction, the greater effect of high source prestige on difficult tasks operated only under agreement set, with this effect modulated under the dominating achievement set.

DISCUSSION

The results can be interpreted primarily within a process of informational conformity. With college students, taking a familiar paper-and-pencil test on which they might normally be considered to be motivated to do well, the situation was strongly a task, an achievement, or an informational setting. The added manipulation by instructions of the goal set seemed to raise or lower this basic achievement set rather than truly staging an achievement vs an agreement condition. When the setting was compounded as an intelligence test situation, the conformity was very high, particularly on difficult items, and conformity occurred to any influence source available, regardless of prestige. When the achievement involvement was reduced with the agreement set, the students were more discriminating and accepted information only from those influences which were relatively high in prestige or ability in this kind of verbal task, choosing in the case of low prestige or ability sources to trust themselves. Also, when the judgments were the very easy ones, the Ss again seemed to be able to be less dominated by the situation and fall back on their own information or judgment. It appears a safe assumption that in this experimental situation the Ss wanted to achieve. To achieve they required certain information. The two available sources of information were their own ability and the offered answers of others. On one extreme, when the task was quite easy and the situation not so task-involved, the Ss made use of their own best judgment. On the other extreme, when the situation was most task-oriented and the most difficult, they looked about for additional information and found it in accepting the judgments of others.

The main effects investigated here have all been demonstrated by other Es to affect conforming behavior individually. Their manipulations in this study were relatively simple and straightforward. Yet, permitted to interact within the framework of a single set of observations of conformity, elaborate mutual interdependence of these factors was demonstrated. In some cases, conditions affecting the occurrence of conformity either maximized or minimized its likelihood, and thus overrode the differential effect of other factors. In other cases, only optimal combination of particular factors afforded display of the effects of other factors upon conformity. These facts suggest the need for considerable caution in generalizing across various reported experimental studies without carefully considering the manner in which all potential determinants of conformity have operated in the background of each study considered.

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Effects of knowledge of results and amount of stimulus change on "resistance to extinction" on a perceptual motor task

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A previous study (Black & Black, 1970) demonstrated that schedule of knowledge of results (KR) affects "resistance to extinction (RE)" on a pursuit rotor in the same manner as partial reinforcement (PR) in instrumental conditioning. The present experiment sought to replicate this finding and to determine if the greater RE of Ss trained under PKR rather than CKR could be attributable simply to the discriminability of acquisition and extinction stimulus conditions. The present results did replicate those obtained earlier in showing an apparent PRE following PKR. However, merely introducing a novel stimulus (a buzzer) at the beginning of extinction failed to produce as large a reduction in RE. These results were interpreted as compatible with the frustration interpretation of PRE.

It is well known that knowledge of results (KR) is a potent determinant of performance in perceptual motor tasks. Thus, providing S with such informative feedback typically facilitates performance, while discontinuing KR tends to result in a progressive impairment of performance (e.g., Bilodeau & Bilodeau, 1961). Consequently, it is not difficult to recognize the apparent parallel between the effects of KR and those of reinforcement in instrumental conditioning in which the presentation of reward leads to the strengthening of the instrumental response, while its withdrawal leads to the extinction of that response.

Recently, Black & Black (1970) were apparently able to extend this parallel between the effects of KR and those of reinforcement by demonstrating that partial KR (PKR) leads to greater "resistance to extinction (RE)" than consistent KR (CKR) in performance on a pursuit-rotor task. Specifically, they reported that Ss were willing to perform longer on the task following the discontinuation of knowledge of time on target (TOT) if their initial training had involved PKR than if it had involved CKR. If such persistence in performing is considered a measure of RE, then an analogue of the "partial reinforcement-extinction effect (PRE-E)" had presumably occurred.

Reasoning further by analogy with the PRE in instrumental conditioning, Black & Black (1970) suggested that the frustration interpretation of this effect might also extend to the pursuit-rotor task. According to this view, as advanced by Amsel (1958) and Spence (1960), Ss trained under PR show greater RE than those trained under CR because, under the former condition, Ss have learned to continue performing in spite of the frustration resulting from nonreinforcement, while under the latter condition they have not. If failure to provide KR of TOT is frustrating in the pursuit-rotor task, then Ss initially trained with PKR might be expected to perform longer at that task following withdrawal of KR than Ss whose initial training involved CKR. This expectation is, of course, consistent with the results reported by Black and Black. On the other hand, an alternative explanation is provided by the "discrimination hypothesis" which was first described by Mowrer & Jones (1945). According to this view, RE is determined by the degree of similarity of the stimulus conditions prevailing during extinction as compared with those during acquisition. Any stimulus change at the outset of extinction which makes thy transition from acquisition to extinction abruptly and readily noticeable will contribute to rapid extinction. Thus, extinction following PR is more gradual than that following CR because Ss trained under PR have experienced nonreinforced trials during training, and the occurrence of such trials during extinction does not represent a novel event. On the other hand, nonreinforced trials do occur initially as a novel event in extinction for Ss trained under CR and thus, the transition from acquisition to extinction is readily discriminated by such Ss.

In the present experiment an attempt was made to manipulate both the effect of schedule of KR of TOT and the amount of change in stimulus conditions introduced at the beginning of extinction. RE was defined as the number of trials that S was willing to continue to perform the task, prior to indicating that he was "bored," etc. Under one condition Ss were asked to track the target while it was rotating and a buzzer was sounding, while under a second condition the buzzer was omitted. For half of the Ss, correct KR of TOT was provided following each of an initial series of 24 trials, while for the other half of the Ss KR was provided on only half of these trials. Following the initial series of 24 trials, "extinction" was instituted for all Ss—i.e., no further KR of TOT was provided. For all Ss during "extinction" the buzzer was sounded during each trial. Thus, the experiment was a 2 by 2 factorial design involving the status of the buzzer of the beginning of "extinction" (i.e., "familiar stimulus" or "novel stimulus") and the schedule of KR prior to the beginning of "extinction" (50% KR or 100% KR). If the greater RE of PKR than CKR Ss is simply the result of the introduction of a "novel stimulus" (i.e., no KR) at the beginning of "extinction" for the CKR Ss, then the introduction of another "novel stimulus" (the buzzer) should also produce at least as great a reduction in RE for those Ss who first are presented the buzzer at the beginning of extinction.

METHOD

The Ss were 60 male volunteers from the introductory course in